

In re Application of RAJARAJAN et al.
Serial No. 09/472,909

Listing of the Claims:

1. (original) A computer-readable medium having computer-executable instructions, comprising:

providing first and second modeling elements, each modeling element being adapted for negotiating connectability to one another;

initiating negotiation between the first and second modeling elements; and

enabling connection between the first modeling element and the second modeling element when the first modeling element allows the connection to the second modeling element and the second modeling element allows the connection to the first modeling element.

2. (original) The computer-readable medium having computer-executable instructions of claim 1 wherein the first modeling element comprises an arc.

3. (original) The computer-readable medium having computer-executable instructions of claim 1 wherein the first modeling element comprises a node.

4. (original) The computer-readable medium having computer-executable instructions of claim 1 further comprising, connecting the first model element to the second model element.

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5. (original) The computer-readable medium having computer-executable instructions of claim 4 wherein connecting the first model element to the second model element includes detecting a user request to connect.

6. (original) The computer-readable medium having computer-executable instructions of claim 5 further comprising, raising an event indicative of the connection of the first model element to the second model element.

7. (original) The computer-readable medium having computer-executable instructions of claim 1, wherein initiating negotiation includes providing an identifier of the first modeling element to the second modeling element.

8. (original) The computer-readable medium having computer-executable instructions of claim 1, wherein initiating negotiation between the first and second modeling elements includes, providing an identifier of the second modeling element to the first modeling element.

9. (original) The computer-readable medium having computer-executable instructions of claim 1, further comprising, communicating a set of attachment criteria from the first model element to the second model element.

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10. (original) The computer-readable medium having computer-executable instructions of claim 9 wherein the attachment criteria includes at least one attach point.

11. (original) The computer-readable medium having computer-executable instructions of claim 1, further comprising, evaluating information communicated from the first model element to the second model element to determine whether to allow the connection to the second modeling element

12. (original) The computer-readable medium having computer-executable instructions of claim 11, wherein the information includes object interface information.

13. (original) The computer-readable medium having computer-executable instructions of claim 11, wherein the information includes type information.

14. (original) The computer-readable medium having computer-executable instructions of claim 11, wherein the information includes information related to at least one other model element connected to the first model element.

15. (original) The computer-readable medium having computer-executable instructions of claim 1, wherein the connection is enabled, and further

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comprising, modifying a displayed representation of the first model element to indicate the enabled connection.

16. (original) The computer-readable medium having computer-executable instructions of claim 1, further comprising, canceling the connection.

17. (original) The computer-readable medium having computer-executable instructions of claim 1, further comprising, canceling the connection when either the first modeling element does not allow the connection or the second modeling element does not allow the connection.

18. (original) The computer-readable medium having computer-executable instructions of claim 1, further comprising, raising an event indicative of a possible connection between the first modeling element and the second modeling element, consuming the event at a policy authority, and canceling the connection via the policy authority.

19. (original) The computer-readable medium having computer-executable instructions of claim 18 wherein the policy authority comprises a surface.

20. (original) The computer-readable medium having computer-executable instructions of claim 1, wherein initiating negotiation between the first

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and second modeling elements comprises, receiving at the first modeling element an identifier of the second modeling element

21. (original) The computer-readable medium having computer-executable instructions of claim 1, wherein initiating negotiation between the first and second modeling elements includes, communicating information from a surface to the first modeling element indicating that the second modeling element is requesting possible connection.

22. (original) A computerized modeling system comprising:
a first model element having a first communication mechanism, the first model element configured to negotiate via the first communication mechanism with other model elements for possible connection thereto;

a second model element having a second communication mechanism, the second model element configured to negotiate via the second communication mechanism with other model elements for possible connection thereto; and

a surface, the surface including a surface communication mechanism, and a negotiation mechanism configured to initiate negotiation between the first and second model elements via the surface communication mechanism.

23. (original) The modeling system of claim 22 wherein the first model element, second model element and surface each comprise an object, and wherein

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the first communication mechanism, second communication mechanism and surface communication mechanism each include a set of interfaces.

24. (original) The modeling system of claim 22, wherein the first modeling element comprises an arc and the second modeling element comprises a node.

25. (original) The modeling system of claim 22, wherein the first and the second modeling elements each comprise an arc.

26. (original) The modeling system of claim 22, wherein the surface negotiation mechanism is configured to raise an event.

27. (original) The modeling system of claim 26 wherein the negotiation mechanism raises an event indicative of a possible connection between the first and the second modeling elements.

28. (original) The modeling system of claim 26 wherein the negotiation mechanism raises an event indicative of a canceled negotiation between the first and the second modeling elements.

29. (original) The modeling system of claim 22 further comprising a policy mechanism configured to allow or cancel negotiations.

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30. (original) The modeling system of claim 22 further comprising a mechanism configured to connect the first and second modeling element to one another.

31. (original) The modeling system of claim 30 wherein the mechanism configured to connect the first and second modeling element to one another includes a user input device.

32. (original) A computer-implemented method, comprising:

- (a) providing first and second modeling elements, each modeling element being adapted for negotiating connectability to one another;
- (b) negotiating connectability between the first and second modeling elements; and
- (c) concluding the negotiation of connectability by:
 - (i) enabling the connection of the first modeling element to the second modeling element when the first modeling element determines that it is connectable to the second modeling element and the second modeling element determines it is connectable to the first modeling element, or
 - (ii) canceling the negotiation of connectability.